

ADVANCED ENERGY INDUSTRIES INC

Form 10-Q

May 06, 2011

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549  
FORM 10-Q**

(Mark One)

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.**

**For the quarterly period ended March 31, 2011.**

or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.**

**For the transition period from \_\_\_\_\_ to \_\_\_\_\_.**

**Commission file number: 000-26966**

**ADVANCED ENERGY INDUSTRIES, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

**84-0846841**

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

**1625 Sharp Point Drive, Fort Collins, CO**

**80525**

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: **(970) 221-4670**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer   
(Do not check if a smaller reporting company)

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of May 4, 2011, there were 43,556,935 shares of the registrant's Common Stock, par value \$0.001 per share, outstanding.



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**Table of Contents****PART I FINANCIAL STATEMENTS****ITEM 1. UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS****ADVANCED ENERGY INDUSTRIES, INC.****Condensed Consolidated Balance Sheets \*****(In thousands, except per share amounts)**

	<b>March 31, 2011</b>	<b>December 31, 2010</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 132,418	\$ 130,914
Marketable securities	7,620	9,640
Accounts receivable, net of allowances of \$4,159 and \$3,440, respectively	121,236	119,893
Inventories	90,109	77,593
Deferred income tax assets	7,689	7,510
Income taxes receivable	9,435	6,061
Other current assets	9,179	10,156
 Total current assets	 377,686	 361,767
 PROPERTY AND EQUIPMENT, net	 36,210	 34,569
 <b>OTHER ASSETS:</b>		
Uncertain tax positions and deposits	8,874	8,874
Goodwill	48,360	48,360
Other intangible assets, net	47,500	48,421
Deferred income tax assets	3,166	3,166
 Total assets	 \$ 521,796	 \$ 505,157
 <b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$ 51,974	\$ 56,185
Income taxes payable	6,989	3,602
Accrued payroll and employee benefits	13,017	23,202
Accrued warranty expense	7,831	7,144
Other accrued expenses	7,433	5,389
Customer deposits	7,735	6,803
 Total current liabilities	 94,979	 102,325
 <b>LONG-TERM LIABILITIES:</b>		
Deferred income tax liabilities	5,119	5,155
Uncertain tax positions	14,176	14,176
Accrued warranty expense	5,597	5,805
Other long-term liabilities	5,067	3,728

Total liabilities	124,938	131,189
Commitments and contingencies (Note 15)		
STOCKHOLDERS EQUITY:		
Preferred stock, \$0.001 par value, 1,000 shares authorized, none issued and outstanding		
Common stock, \$0.001 par value, 70,000 shares authorized; 43,520 and 43,330 shares issued and outstanding, respectively	44	43
Additional paid-in capital	262,672	258,398
Retained earnings	107,358	88,453
Accumulated other comprehensive income	26,784	27,074
Total stockholders equity	396,858	373,968
Total liabilities and stockholders equity	\$ 521,796	\$ 505,157

\* Amounts as of March 31, 2011 are unaudited. Amounts as of December 31, 2010 are derived from the December 31, 2010 audited Consolidated Financial Statements.

The accompanying notes are an integral part of these Condensed Consolidated Financial Statements.

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**ADVANCED ENERGY INDUSTRIES, INC.**  
**Condensed Consolidated Statements of Operations (Unaudited)**  
(In thousands, except per share amounts)

	<b>Three Months Ended</b>	
	<b>March 31,</b>	
	<b>2011</b>	<b>2010</b>
SALES	\$ 137,652	\$ 69,687
COST OF SALES	75,607	40,480
GROSS PROFIT	62,045	29,207
OPERATING EXPENSES:		
Research and development	15,862	11,142
Selling, general and administrative	20,905	12,229
Amortization of intangible assets	921	
Total operating expenses	37,688	23,371
OPERATING INCOME	24,357	5,836
OTHER INCOME, NET	663	385
Income from continuing operations before income taxes	25,020	6,221
Provision for income taxes	6,254	1,371
INCOME FROM CONTINUING OPERATIONS, NET OF INCOME TAXES	18,766	4,850
Results from discontinued operations, net of income taxes	140	1,367
<b>NET INCOME</b>	<b>\$ 18,906</b>	<b>\$ 6,217</b>
Basic weighted-average common shares outstanding	43,440	42,074
Diluted weighted-average common shares outstanding	44,133	42,680
<b>EARNINGS PER SHARE:</b>		
CONTINUING OPERATIONS:		
BASIC EARNINGS PER SHARE	\$ 0.43	\$ 0.12
DILUTED EARNINGS PER SHARE	\$ 0.43	\$ 0.11
DISCONTINUED OPERATIONS;		
BASIC EARNINGS PER SHARE	\$ 0.00	\$ 0.03
DILUTED EARNINGS PER SHARE	\$ 0.00	\$ 0.03
<b>NET INCOME:</b>		
<b>BASIC EARNINGS PER SHARE</b>	<b>\$ 0.44</b>	<b>\$ 0.15</b>
<b>DILUTED EARNINGS PER SHARE</b>	<b>\$ 0.43</b>	<b>\$ 0.15</b>

The accompanying notes are an integral part of these Condensed Consolidated Financial Statements.

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**ADVANCED ENERGY INDUSTRIES, INC.**  
**Condensed Consolidated Statements of Cash Flows (Unaudited)**  
(In thousands)

	<b>Three Months Ended</b>	
	<b>March 31,</b>	
	<b>2011</b>	<b>2010</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Net income	\$ 18,906	\$ 6,217
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	3,263	1,843
Stock-based compensation expense	2,740	1,875
Provision (benefit) for deferred income taxes	(180)	1,925
Net loss on disposal of assets	556	
Changes in operating assets and liabilities, net of assets acquired:		
Accounts receivable	(904)	(11,818)
Inventories	(11,927)	(10,682)
Other current assets	3,490	(734)
Accounts payable	(4,212)	4,657
Other current liabilities and accrued expenses	(9,751)	2,550
Income taxes	386	(5,596)
Non-current assets		(1,650)
Non-current liabilities	348	36
Net cash provided by (used in) operating activities	2,715	(11,377)
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Purchase of marketable securities	22	(64,932)
Proceeds from sale of marketable securities	2,000	60,537
Proceeds from sale of assets	16	
Purchase of property and equipment	(4,428)	(800)
Net cash used in investing activities	(2,390)	(5,195)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Payments on capital lease obligations	(39)	(11)
Proceeds from exercise of stock options	1,621	503
Excess tax benefit from stock-based compensation deduction	(88)	15
Net cash provided by financing activities	1,494	507
<b>EFFECT OF CURRENCY TRANSLATION ON CASH</b>	(315)	(2,398)



<b>INCREASE (DECREASE ) IN CASH AND CASH EQUIVALENTS</b>	1,504	(18,463)
CASH AND CASH EQUIVALENTS, beginning of period	130,914	133,106

<b>CASH AND CASH EQUIVALENTS, end of period</b>	\$ 132,418	\$ 114,643
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**SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:**

Cash paid for interest	\$ 10	\$ 27
Cash paid for income taxes	6,246	6,006
Cash received for refunds of income taxes	176	
Cash held in banks outside the United States	58,494	70,727

The accompanying notes are an integral part of these Condensed Consolidated Financial Statements.

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**ADVANCED ENERGY INDUSTRIES, INC.**

**Notes to Condensed Consolidated Financial Statements (Unaudited)**

**NOTE 1. BASIS OF PRESENTATION**

We design, manufacture, sell and support power conversion products that transform power into various usable forms. Our products enable manufacturing processes that use thin-film deposition for various products, such as semiconductor devices, flat panel displays, solar panels and architectural glass. We also supply thermal instrumentation products for advanced temperature control in the thin-film process for these same markets. Our solar inverter products support renewable power generation solutions for residential, commercial and utility-scale solar projects and installations. Our network of global service support centers offer repair services, conversions, upgrades and refurbishments to companies using our products. We also offer a wide variety of operations and maintenance service plans that can be tailored for individual photovoltaic ( PV ) sites of all sizes.

We are organized into two strategic business units ( SBU ) based on the products and services provided.

**Thin Films Deposition Power Conversion and Thermal Instrumentation** ( Thin Films ) SBU represents our products for direct current ( DC ), pulsed DC mid frequency, and radio frequency ( RF ) power supplies, matching networks and RF instrumentation as well as thermal instrumentation products.

**Renewable Power Inverters** ( Renewables ) SBU offers both a transformer-based or transformerless advanced grid-tie PV solution for residential, commercial and utility-scale system installations. Our PV inverters are designed to convert renewable solar power, drawn from large and small scale solar arrays, into high-quality, reliable electrical power.

In the opinion of management, the accompanying unaudited Condensed Consolidated Financial Statements contain all adjustments, consisting of normal, recurring adjustments, necessary to present fairly the financial position of Advanced Energy Industries, Inc., a Delaware corporation, and its wholly owned subsidiaries ( we , us , our , Advanced Energy , or the Company ) at March 31, 2011, and the results of our operations and cash flows for the three months ended March 31, 2011 and 2010.

The Condensed Consolidated Financial Statements included herein have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission ( SEC ). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ( U.S. GAAP ) have been condensed or omitted pursuant to such rules and regulations. These unaudited Condensed Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements and Notes thereto contained in the Company 's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 and other financial information filed with the SEC.

**ESTIMATES AND ASSUMPTIONS** The preparation of our Condensed Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. We believe that the significant estimates, assumptions and judgments when accounting for items and matters such as allowances for doubtful accounts, excess and obsolete inventory, warranty reserves, acquisitions, asset valuations, asset life, depreciation, amortization, recoverability of assets, impairments, deferred revenue, stock option and restricted stock grants, taxes, and other provisions are reasonable, based upon information available at the time they are made. Actual results may differ from these estimates under different assumptions or conditions.

**RECLASSIFICATIONS** We have reclassified certain amounts in our 2010 Condensed Consolidated Financial Statements to reflect discontinued operations. These reclassifications had no impact on our financial position or results of operations.

**NEW ACCOUNTING PRONOUNCEMENTS** From time to time, the Financial Accounting Standards Board or other standards setting bodies issue new accounting pronouncements. Updates to the FASB Accounting Standards Codification are communicated through issuance of an Accounting Standards Update. Unless otherwise discussed, we believe that the impact of recently issued guidance, whether adopted or to be adopted in the future, is not expected to have a material impact on our Consolidated Financial Statements upon adoption.

**Table of Contents****NOTE 2. BUSINESS ACQUISITION AND DISPOSITION****Acquisition**

On May 3, 2010, we acquired all of the outstanding common stock of PV Powered, a privately-held Oregon corporation based in Bend, Oregon, for approximately \$90.3 million consisting of 1.0 million shares of our common stock with a market value of approximately \$14.7 million and cash payments totaling \$75.6 million, net of cash acquired.

PV Powered is a leading manufacturer of grid-tied PV inverters in the residential, commercial and utility-scale markets. PV Powered manufactures high-reliability transformer-based PV inverters utilized in residential, commercial roof top and ground mount systems in the North American market. Its inverters range in size from 30 kilowatts ( kW ) to two megawatts for the commercial market and 1kW to 5kW for the residential market, with market leading efficiency ratings. PV Powered was included in the Renewables business unit.

We recorded the acquisition of PV Powered using the acquisition method of accounting and the purchase price was allocated to the tangible assets, intangible assets, and liabilities acquired based on estimated fair values as of the date of acquisition. The excess of the purchase price (consideration transferred) over the respective fair values of identifiable assets and liabilities acquired was recorded as goodwill. The goodwill resulting from the acquisition is not tax deductible. Our purchase price allocation is not final as of March 31, 2011, as we continue to evaluate the expected value of the pre-acquisition net operating losses of PV Powered. As of March 31, 2011, we estimated the value of the pre-acquisition net operating losses to be \$1.9 million. Any adjustments to this amount in the final purchase price allocation will result in an adjustment to the recorded goodwill and will not affect our results of operations. Any changes in our ability to utilize the pre-acquisition net operating losses after the final purchase price allocation will be reported in earnings.

The components of the fair value of the total consideration transferred for the PV Powered acquisition are as follows (in thousands):

Cash paid to owners	\$ 76,301
Cash acquired	(724)
Common stock issued - 997,966 shares	14,690
Total fair value of consideration transferred	 \$ 90,267

The following table summarizes estimated fair values of the assets acquired and liabilities assumed as of May 3, 2010 (in thousands):

Accounts receivable	\$ 4,777
Inventories	8,363
Other current assets	277
Deferred tax assets	2,746
Property and equipment	4,065
Deposits and other noncurrent assets	67
Accounts payable	(5,480)
Accrued liabilities	(2,744)
Deferred tax liabilities	(18,711)
Other long-term liabilities	(2,739)
	(9,379)
Amortizable intangible assets:	
Trademarks	5,277

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Technology	28,208
In process research and development	14,868
Customer relationships	2,213
Backlog	720
Total amortizable intangible assets	51,286
Total identifiable net assets	41,907
Goodwill	48,360
Total fair value of consideration transferred	\$ 90,267

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A summary of the intangible assets acquired, amortization method and estimated useful lives follows (in thousands):

	<b>Amount</b>	<b>Amortization Method</b>	<b>Useful Life</b>
Trademarks	\$ 5,277	Accelerated	10 years
Technology	28,208	Accelerated	7 years
In process research and development	14,868		
Customer relationships	2,213	Accelerated	7 years
Backlog	720	Straight-line	6 months
	\$ 51,286		

Our amortization of in process research and development will not begin until the specific project is complete and put into production.

The results of PV Powered operations are included in our Condensed Consolidated Statements of Operations beginning May 3, 2010. The results of PV Powered s operations for the three months ended March 31, 2011 are as follows (in thousands):

Sales	\$ 27,624
Net income	4,178

**Pro Forma Results for PV Powered Acquisition**

The following unaudited *pro forma* financial information presents the combined results of operations of Advanced Energy and PV Powered as if the acquisition had occurred as of January 1, 2009. The pro forma financial information is presented for informational purposes and is not indicative of the results of operations that would have been achieved if the acquisition had taken place at January 1, 2009. The unaudited pro forma financial information for the three months ended March 31, 2010 includes the historical results of Advanced Energy and PV Powered for the three months ended March 31, 2010.

Our unaudited pro forma results include amortization charges for acquired intangible assets and related tax effects. These pro forma results consider the sale of the gas flow control business and related product lines as discontinued operations. Our unaudited pro forma results for the three months ended March 31, 2010 follow (in thousands except per share data):

Sales	\$ 79,098
Net income	5,232

**Earnings per share:**

Basic	\$ 0.12
Diluted	0.12

**Disposition**

On October 15, 2010, we completed the sale of our gas flow control business, which includes our Aera<sup>®</sup> mass flow control and related product lines, to Hitachi Metals, Ltd. for approximately \$43.3 million.

In accordance with authoritative accounting guidance for reporting discontinued operations, our results from continuing operations were reduced by the revenue and costs associated with our gas flow control business which are included in the income from discontinued operations, net of taxes, in our Condensed Consolidated Statements of Operations.

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Operating results from discontinued operations are as follows (in thousands):

	<b>Three Months Ended March 31,</b>	
	<b>2011</b>	<b>2010</b>
Sales	\$ 6,346	\$ 11,865
Cost of sales	6,686	7,964
Gross margin	(340)	3,901
Operating expenses:		
Research and development	8	447
Selling, general and administrative	50	1,054
Amortization of intangible assets		122
Total operating expenses	58	1,623
Operating income (loss) from discontinued operations	(398)	2,278
Other income	611	
Income from discontinued operations before income taxes	213	2,278
Income taxes on income from discontinued operations	73	911
Income from discontinued operations, net of income taxes	\$ 140	\$ 1,367

**NOTE 3. INCOME TAXES**

The following table sets out the tax expense and the effective tax rate for our income from continuing operations (in thousands):

	<b>Three Months Ended March 31,</b>	
	<b>2011</b>	<b>2010</b>
Income from continuing operations before income taxes	\$ 25,020	\$ 6,221
Income tax expense	6,254	1,371
Effective tax rate	25.0%	22.0%

Our effective tax rate for continuing operations for the three months ended March 31, 2011 and March 31, 2010 is 25.0% and 22.0%, respectively. Our tax rate is lower than the U.S. federal income tax rate primarily due to the benefit of earnings in foreign jurisdictions which are subject to lower tax rates. We plan to repatriate approximately \$30.0 million from Japan during 2011, for which a deferred income tax expense of \$2.1 million was recorded in 2010. Other than this planned repatriation, undistributed earnings of foreign subsidiaries are considered to be permanently reinvested and accordingly, no provision for U.S. federal and state income taxes or foreign withholding taxes has been made.

We had unrecognized tax benefits of \$15.7 million at December 31, 2010 and \$15.8 million as of March 31, 2011. Our policy is to classify accrued penalties and interest related to unrecognized tax benefits in our income tax provision. For the three months ended March 31, 2011 and March 31, 2010, the amount of interest and penalties accrued related to our unrecognized tax benefits was nominal.

**NOTE 4. EARNINGS PER SHARE**

Basic earnings per share ( EPS ) is computed by dividing income available to common stockholders by the weighted-average number of common shares outstanding during the period. The computation of diluted EPS is similar

to the computation of basic EPS except that the numerator is increased to exclude charges which would not have been incurred, and the denominator is increased to include the number of additional common shares that would have been outstanding (using the if-converted and treasury stock methods), if securities containing potentially dilutive common shares (stock options) had been converted to common shares, and if such assumed conversion is dilutive.

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The following is a reconciliation of our weighted-average shares outstanding used in the calculation of basic and diluted earnings per share for the three months ended March 31, 2011 and 2010 (in thousands, except per share data):

	<b>2011</b>	<b>2010</b>
Net income from continuing operations, net of income taxes	\$ 18,766	\$ 4,850
Basic weighted-average shares outstanding	43,440	42,074
Assumed exercise of dilutive stock options and restricted stock units	693	606
Diluted weighted-average shares outstanding	44,133	42,680

## Income from Continuing Operations:

## Earnings per common share:

Basic earnings per share	\$ 0.43	\$ 0.12
Diluted earnings per share	\$ 0.43	\$ 0.11

As of March 31, 2011 and 2010, stock options totaling 3.3 million shares and 3.1 million shares were not included in the computation of diluted earnings per share because the exercise price exceeded the average price per share for the period.

**NOTE 5. MARKETABLE SECURITIES**

Our investments with original maturities of more than three months at time of purchase are considered marketable securities available for sale.

The composition of our marketable securities is as follows (in thousands):

	<b>March 31, 2011</b>		<b>December 31, 2010</b>	
	<b>Cost</b>	<b>Fair Value</b>	<b>Cost</b>	<b>Fair Value</b>
Treasury bills	\$ 2,001	\$ 2,003	\$ 2,003	\$ 2,006
Certificates of deposit	3,115	3,115	3,126	3,126
Corporate bonds/notes	1,001	1,002	1,002	1,004
Agency bonds/notes	1,500	1,500	3,503	3,504
Total securities	\$ 7,617	\$ 7,620	\$ 9,634	\$ 9,640

The maturities of our marketable securities available for sale as of March 31, 2011 are as follows:

	<b>Earliest</b>		<b>Latest</b>
Treasury bills	5/31/2011	to	5/31/2011
Certificates of deposit	4/14/2011	to	12/10/2011
Corporate bonds/notes	6/3/2011	to	6/3/2011
Agency bonds	4/18/2011	to	4/18/2011

The value and liquidity of our marketable securities are affected by market conditions, the ability of the issuer to make principal and interest payments when due, and the functioning of the markets in which these securities are traded. Our current investments in marketable securities are expected to be liquidated during the next year.

As of March 31, 2011, we do not believe any of the underlying issuers of our marketable securities are presently at risk of default.



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The following tables present information about our financial assets measured at fair value on a recurring basis as of March 31, 2011 and December 31, 2010, and indicate the fair value hierarchy of the valuation techniques utilized to determine such fair value (in thousands).

<b>As of March 31, 2011:</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Total</b>
Treasury bills	\$ 2,003	\$	\$ 2,003
Certificates of deposit		3,115	3,115
Corporate bonds/notes	1,002		1,002
Agency bonds/notes	1,500		1,500
<b>Total</b>	<b>\$ 4,505</b>	<b>\$ 3,115</b>	<b>\$ 7,620</b>

<b>As of December 31, 2010:</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Total</b>
Treasury bills	2,006		2,006
Certificates of deposit		3,126	3,126
Corporate bonds/notes	1,004		1,004
Agency bonds/notes	3,504		3,504
<b>Total</b>	<b>\$ 6,514</b>	<b>\$ 3,126</b>	<b>\$ 9,640</b>

We did not have any Level 3 investments or financial liabilities measured at fair value on a recurring basis as of March 31, 2011 and December 31, 2010. We have reclassified our investments in certificates of deposits from Level 1 into Level 2 as we believe this more appropriately reflects the level of inputs available for valuing these financial instruments. There were no transfers in and out of Level 1, 2 or 3 fair value measurements during the three months ended March 31, 2011.

**NOTE 7. INVENTORIES**

Our inventories are valued at the lower of cost or market and computed on a first-in, first-out (FIFO) basis. Components of inventories are as follows (in thousands):

	<b>March 31, 2011</b>	<b>December 31, 2010</b>
Parts and raw materials	\$ 60,369	\$ 53,755
Work in process	7,821	5,594
Finished goods	21,919	18,244
	<b>\$ 90,109</b>	<b>\$ 77,593</b>

**Table of Contents****NOTE 8. PROPERTY AND EQUIPMENT**

Detail of our property and equipment is as follows (in thousands):

	<b>March 31, 2011</b>	<b>December 31, 2010</b>
Buildings and land	\$ 1,744	\$ 1,701
Machinery and equipment	49,844	53,885
Computer and communication equipment	20,840	23,296
Furniture and fixtures	2,968	5,717
Vehicles	463	541
Leasehold improvements	27,668	28,003
Construction in process	3,407	3,996
	106,934	117,139
Less: Accumulated depreciation	(70,724)	(82,570)
	\$ 36,210	\$ 34,569

Depreciation expense recorded in continuing operations for the three months ended March 31, 2011 and 2010 is as follows (in thousands):

	<b>2011</b>	<b>2010</b>
Three months	\$ 2,342	\$ 1,521

**NOTE 9. GOODWILL**

The following summarizes changes in our goodwill during the three months ended March 31, 2011 (in thousands). There was no goodwill during the three months ended March 31, 2010.

	<b>2011</b>
Gross carrying amount, beginning of period	\$ 48,360
Additions and adjustments	
Impairments	
Net carrying amount, end of period	\$ 48,360

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Our other intangible assets consisted of the following as of March 31, 2011 (in thousands, except weighted-average useful life):

	<b>Gross</b>		<b>Net</b>	<b>Weighted-Average Useful Life in Years</b>
	<b>Carrying Amount</b>	<b>Accumulated Amortization</b>	<b>Carrying Amount</b>	
<b>Amortizable intangibles:</b>				
Technology-based	\$ 31,552	\$ (3,121)	\$ 28,431	7
Trademarks and other	8,210	(664)	7,546	8
Total amortizable intangibles	\$ 39,762	\$ (3,785)	\$ 35,977	

Our other intangible assets consisted of the following as of December 31, 2010 (in thousands, except weighted-average useful life):

	<b>Gross</b>		<b>Net</b>	<b>Weighted-Average Useful Life in Years</b>
	<b>Carrying Amount</b>	<b>Accumulated Amortization</b>	<b>Carrying Amount</b>	
<b>Amortizable intangibles:</b>				
Technology-based	\$ 31,552	\$ (2,270)	\$ 29,282	7
Trademarks and other	8,210	(594)	7,616	8
Total amortizable intangibles	\$ 39,762	\$ (2,864)	\$ 36,898	

Amortization expense relating to intangible assets included in our results from continuing operations for the three months ended March 31, 2011 and 2010 is as follows (in thousands):

	<b>2011</b>	<b>2010</b>
Three months	\$ 921	\$

Estimated amortization expense relating to intangible assets includes estimates of when in process research and development will move into production. Our estimated amortization expense for each of the five years 2011 through 2015 and thereafter is as follows (in thousands):

	<b>Year Ending December 31,</b>
2011 (Remaining)	\$ 2,762
2012	5,007
2013	6,611
2014	7,131
2015	6,569
Thereafter	7,897
	\$ 35,977

Intangible assets acquired in a business combination that are used in research and development activities are considered to have indefinite lives until the completion or abandonment of the associated research and development efforts. Non-amortizable intangibles consist of the following (in thousands):

		<b>March 31, 2011</b>	<b>December 31, 2010</b>
<b>Non-amortizable intangibles:</b>			
In process research and development	13	\$ 11,523	\$ 11,523

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**Table of Contents****NOTE 11. WARRANTIES**

Provisions of our sales agreements include product warranties customary to these types of agreements, ranging from 18 months to 10 years following installation. Our provision for the estimated cost of warranties is recorded when revenue is recognized. Our warranty provision is based on historical experience by product, configuration and geographic region. Accruals are established for warranty issues that are probable to result in future costs. Changes in accrued product warranties for the three months ended March 31, 2011 and 2010, including those acquired on May 3, 2010 as part of the PV Powered acquisition, were as follows (in thousands):

	<b>2011</b>	<b>2010</b>
Balance at beginning of period	\$ 12,949	\$ 7,005
Increases to accruals related to sales during the period	2,551	2,255
Warranty expenditures	(2,072)	(1,386)
Balance at end of period	\$ 13,428	\$ 7,874

**NOTE 12. STOCK-BASED COMPENSATION**

We recognize stock-based compensation expense based on the fair value of awards issued. Stock-based compensation for the three months ended March 31, 2011 and 2010 is as follows (in thousands):

	<b>2011</b>	<b>2010</b>
Three months	\$ 2,740	\$ 1,875

*Stock Options*

Stock option awards are granted with an exercise price equal to the market price of our stock at the date of grant, a four-year vesting schedule, and a term of 10 years.

A summary of our stock option activity for the three months ended March 31, 2011 is as follows (in thousands):

	<b>Shares</b>
Options outstanding at December 31, 2010	5,709
Options granted	398
Options exercised	(165)
Options forfeited	(185)
Options expired	(50)
Options outstanding at March 31, 2011	5,707

*Restricted Stock Units*

A summary of our non-vested Restricted Stock Units activity for the three months ended March 31, 2011 is as follows (in thousands):

	<b>Shares</b>
Balance at December 31, 2010	447
RSUs granted	182
RSUs vested	(33)
RSUs forfeited	(17)
Balance at March 31, 2011	579

**NOTE 13. COMPREHENSIVE INCOME**

Comprehensive income consists of net income, foreign currency translation adjustments, and net unrealized holding

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gains (losses) on available-for-sale investments for the three months ended March 31, 2011 and 2010 is presented below (in thousands):

	<b>2011</b>	<b>2010</b>
Net income	\$ 18,906	\$ 6,217
Adjustments to arrive at comprehensive income, net of taxes:		
Unrealized holding gain (loss) on available-for-sale securities	(3)	3
Cumulative translation adjustment	(287)	(3,171)
Comprehensive income	\$ 18,616	\$ 3,049

**NOTE 14. ACCUMULATED OTHER COMPREHENSIVE INCOME**

Accumulated other comprehensive income consisted of the following (in thousands):

**Unrealized holding gain (loss) on available-for-sale securities:**

Balance at December 31, 2010	\$ 6
Unrealized holding loss, net of realized amounts reclassified to net income	(3)
Balance at March 31, 2011	3

**Accumulated foreign currency translation adjustments:**

Balance at December 31, 2010	27,068
Translation adjustments	(287)
Balance at March 31, 2011	26,781
Total accumulated other comprehensive income	\$ 26,784

**NOTE 15. COMMITMENTS AND CONTINGENCIES**

We are involved in disputes and legal actions from time to time in the ordinary course of our business.

We have firm purchase commitments and agreements with various suppliers to ensure the availability of components. Our policy with respect to all purchase commitments is to record losses, if any, when they are probable and reasonably estimable. We believe we have an adequate provision for potential exposure related to inventory on order which may go unused.

**NOTE 16. RELATED PARTY TRANSACTIONS**

Members of our Board of Directors hold various executive positions and serve as directors of other companies, including companies that are customers or suppliers. During the three months ended March 31, 2009 and 2010, we had sales to two such companies totaling approximately \$1.0 million each period. Aggregate accounts receivable from these two customers totaled \$0.4 million at March 31, 2011 and \$0.3 million at December 31, 2010.

We lease our executive offices and manufacturing facilities in Fort Collins, Colorado from a limited liability partnership in which Douglas Schatz, our Chairman of the Board and former Chief Executive Officer, holds an interest. The leases relating to these spaces expire during 2015 and obligate us to total annual payments of approximately \$2.4 million which includes facilities rent and common area maintenance costs.

Related party rent and related expenses for the three months ended March 31, 2011 and 2010 were \$0.6 million and \$0.7 million, respectively.

**NOTE 17. SIGNIFICANT CUSTOMER INFORMATION**

Sales to Applied Materials Inc., our largest customer, were 15% of total sales for the three months ended March 31, 2011 and 33% of total sales for the three months ended March 31, 2010. No other customer accounted for 10% or more of our sales during these periods.

Applied Materials, Inc. accounted for 11% of gross accounts receivable as of March 31, 2011. ULVAC, Inc. accounted for 11% of gross accounts receivable as of December 31, 2010. No other customer accounted for 10% or more of our gross accounts receivable as of March 31, 2011 or December 31, 2010.



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**NOTE 18. SEGMENT INFORMATION**

During the first quarter of fiscal 2011, we began to operate as two reportable business segments. Our two business units, Thin Films and Renewables, will enable improved execution and a strategic focus on two distinct markets. The re-alignment of our businesses reflects the success of our strategy to maintain our leadership in thin film markets, while also expanding into high-growth renewable markets with our inverter product portfolio. The creation of these two units will enable greater focus on each business' unique needs and requirements, allowing each to expand and accelerate our growth by better serving each of these very different industries.

Our chief operating decision maker and management personnel began reviewing our performance and making resource allocation decisions by reviewing the results of our two business segments separately. Revenue and operating profit is now reviewed by our chief operating decision maker, however, we have only divided inventory and property and equipment based on business segment. Due to the structure of our internal organization and the manner in which expenses were tracked and managed and as a result of the design of our internal systems during fiscal 2010, we were unable to recast related financial information by operating segment for fiscal 2010 and prior. As such, segment information, other than revenue, for the three months ended March 31, 2010 is not reported as it is impracticable to do so.

We are organized into the Thin Films and Renewables strategic business units ( SBU ) based on the products and services provided.

**Thin Films Deposition Power Conversion and Thermal Instrumentation** ( Thin Films ) SBU represents our products for direct current ( DC ), pulsed DC mid frequency, and radio frequency ( RF ) power supplies, matching networks and RF instrumentation as well as thermal instrumentation products. Our Thin Films SBU principally serves our OEM and end customers in the semiconductor, flat panel display, solar module and other capital equipment markets.

Our power conversion systems refine, modify and control the raw electrical power from a utility and convert it into power that may be customized and is predictable and repeatable. Our power conversion systems are primarily used by semiconductor, solar panel and similar thin-film manufacturers including flat panel display, data storage and architectural glass manufacturers.

Our thermal instrumentation products provide temperature measurement solutions for applications in which time-temperature cycles affect material properties, productivity and yield. These products are used in rapid thermal processing, chemical vapor deposition, and other semiconductor and solar applications requiring non-contact temperature measurement.

Our network of global service support centers offer repair services, conversions, upgrades and refurbishments to companies using our products.

**Renewable Power Inverters** ( Renewables ) SBU offers both a transformer-based or transformerless advanced grid-tie PV solution for residential, commercial and utility-scale system installations. Our PV inverters are designed to convert renewable solar power, drawn from large and small scale solar arrays, into high-quality, reliable electrical power. Our Renewables SBU focuses on residential, commercial and utility-scale solar projects and installations, selling primarily to distributors, Engineering, Procurement, and Construction ( EPC ) contractors, developers, and utility companies. Our Renewables revenue has seasonal variations. Installations of inverters are normally lowest during the first quarter as a result of typically poor weather and installation tendencies.

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Revenue with respect to operating segments for the three months ending March 31, 2011 and 2010 is as follows (in thousands):

	<b>2011</b>		<b>2010</b>		<b>Increase (Decrease)</b>	<b>Percent Change</b>
Thin Films	\$ 100,099	72.7%	\$ 67,423	96.8%	\$ 32,676	48.5%
Renewables	37,553	27.3%	2,264	3.2%	35,289	1558.7%
Total	\$ 137,652	100.0%	\$ 69,687	100.0%	\$ 67,965	97.5%

Income from continuing operations before income taxes by operating segment for the three months ended March 31, 2011 is as follows (in thousands):

Thin Films	\$ 24,824	99.2%
Renewables	2,512	10.0%
Total segment operating income	27,336	109.2%
Corporate expenses	(2,979)	-11.9%
Other income, net	663	2.7%
Income from continuing operations before income taxes	\$ 25,020	100.0%

Segment assets consist of inventories and property and equipment, net. A summary of consolidated total assets by segment as of March 31, 2011 follows (in thousands):

Thin Films	\$ 75,067
Renewables	50,318
Total segment assets	125,385
Unallocated corporate property and equipment	831
Corporate assets	395,580
Consolidated total assets	\$ 521,796

Corporate is a non-operating business segment with the main purpose of supporting operations. Our amortization of intangibles is not allocated to business segment financial statements reviewed by our chief operating decision maker and management personnel. Unallocated corporate assets include accounts receivable, deferred income taxes and intangible assets.

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**ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

**Special Note on Forward-Looking Statements**

The following discussion contains, in addition to historical information, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Statements in this report that are not historical information are forward-looking statements. For example, statements relating to our beliefs, expectations and plans are forward-looking statements, as are statements that certain actions, conditions or circumstances will continue. The inclusion of words such as anticipate, expect, project, estimate, can, may, should, enables, plan, intend, or believe, as well as statements that events will occur or continue, indicate forward-looking statements. Forward-looking statements involve risks and uncertainties, which are difficult to predict and many of which are beyond our control. Therefore, actual results could differ materially and adversely from those expressed in any forward-looking statements.

For additional information regarding factors that may affect our actual financial condition, results of operations and accuracy of our forward-looking statements, see the information under the caption Risk Factors in Part II Item 1A of this Quarterly Report on Form 10-Q and, in our Annual Report on Form 10-K for the year ended December 31, 2010. We undertake no obligation to revise or update any forward-looking statements for any reason.

***BUSINESS OVERVIEW***

We design, manufacture, sell and support power conversion products that transform power into various usable forms. Our products enable manufacturing processes that use thin-film deposition for various products as well as grid-tie power conversion. We also supply thermal instrumentation products used for temperature control in the thin-film process. Our network of global service support centers provides local repair and field service capability in key regions.

On May 3, 2010, we acquired PV Powered, Inc. ( PV Powered ), a privately-held Oregon corporation based in Bend, Oregon. PV Powered is a leading manufacturer of grid-tie PV inverters in the residential, commercial and utility-scale markets. The combined offerings of Advanced Energy and PV Powered provide our customers with solutions in a wider power range and increase the number of solar array opportunities where our products can be utilized.

On October 15, 2010, we sold our gas flow control business, which includes the Aera® mass flow control and related product lines, to Hitachi Metals Ltd. Accordingly, the results of operations from our gas flow control business have been excluded from our discussions relating to continuing operations.

During the first quarter of fiscal 2011, we began to operate as two reportable business segments ( SBU ). Our two business units, Thin Films and Renewables, will enable improved execution and a strategic focus on two distinct markets. Both business units will leverage the deep competencies in power conversion and energy management that Advanced Energy has developed in the last 25+ years. The re-alignment of our businesses reflects the success of our strategy to maintain our leadership in thin film markets, while also expanding into high-growth renewable markets with our inverter product portfolio. The creation of these two units will enable greater focus on each business' unique needs and requirements, allowing each to expand and accelerate our growth by better serving each of these very different industries

Due to the structure of our internal organization and the manner in which expenses were tracked and managed and as a result of the design of our internal systems during fiscal 2010, we were unable to recast related financial information by operating segment for fiscal 2010 and prior. As such, segment information, other than revenue, for the three months ended March 31, 2010 is not reported as it is impracticable to do so.

**Thin Films Deposition Power Conversion and Thermal Instrumentation ( Thin Films )** - Our Thin Films SBU represents our products for direct current ( DC ), pulsed DC mid frequency, and radio frequency ( RF ) power supplies, matching networks and RF instrumentation as well as thermal instrumentation products. Our Thin Films SBU principally serves OEM and end customers in the semiconductor, flat panel display, solar panel and other capital equipment markets.

Our power conversion systems refine, modify and control the raw electrical power from a utility and convert it into power that may be customized and is predictable and repeatable. Our power conversion systems are primarily used by semiconductor, solar panel and similar thin-film manufacturers including flat panel display,

data storage and architectural glass manufacturers.

Our thermal instrumentation products provide temperature measurement solutions for applications in which time-temperature cycles affect material properties, productivity and yield. These products are used in rapid thermal

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processing, chemical vapor deposition, and other semiconductor and solar applications requiring non-contact temperature measurement.

Our network of global service support centers offer repair services, conversions, upgrades and refurbishments to companies using our products.

**Renewable Power Inverters ( Renewables )** Our Renewables SBU offers both an advanced transformer-based or transformerless grid-tie PV solution for residential, commercial and utility-scale system installations. Our PV inverters are designed to convert renewable solar power, drawn from large and small scale solar arrays, into high-quality, reliable electrical power. Our Renewables SBU focuses on residential, commercial and utility-scale solar projects and installations, selling primarily to distributors, Engineering, Procurement, and Construction contractors, developers, and utility companies. Our Renewables revenue has seasonal variations. Installations of inverters are normally lowest during the first quarter as a result of typically poor weather and installation tendencies by our customers.

Our analysis presented below is organized to provide the information we believe will be instructive for understanding our historical performance and relevant trends going forward. This discussion should be read in conjunction with our Condensed Consolidated Financial Statements in Part I, Item 1 of this report, including the notes thereto.

**Continuing Operations***OVERALL RESULTS*

The following table sets forth, for the three months ended March 31, 2011 and 2010, certain data from our Condensed Consolidated Statements of Operations (in thousands):

	<b>2011</b>	<b>2010</b>
Sales	\$ 137,652	\$ 69,687
Gross profit	\$ 62,045	\$ 29,207
Operating expenses	37,688	23,371
Operating income	24,357	5,836
Other income, net	663	385
Income from continuing operations before income taxes	25,020	6,221
Provision for income taxes	6,254	1,371
Net income from continuing operations	\$ 18,766	\$ 4,850

The following table sets forth, for the three months ended March 31, 2011 and 2010, the percentage of sales from our Condensed Consolidated Statements of Operations:

	<b>2011</b>	<b>2010</b>
Sales	100.0%	100.0%
Gross profit	45.1%	41.9%
Operating expenses	27.4%	33.5%
Operating income	17.7%	8.4%
Other income, net	0.5%	0.6%
Income from continuing operations before income taxes	18.2%	9.0%
Provision for income taxes	4.6%	2.0%

Net income from continuing operations	13.6%	7.0%
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Our sales by segment for the three months ended March 31, 2011 and 2010 were as follows (in thousands):

	<b>2011</b>	<b>2010</b>	<b>Increase/ (Decrease)</b>	<b>Percent Change</b>
Thin Films:				
Semiconductor capital equipment market	\$ 45,955	\$ 40,941	\$ 5,014	12.2%
Non-semiconductor capital equipment	40,448	15,569	24,879	159.8%
Global support	13,696	10,913	2,783	25.5%
Total Thin Films	100,099	67,423	32,676	48.5%
Renewables	37,553	2,264	35,289	1558.7%
Total sales	\$ 137,652	\$ 69,687	\$ 67,965	97.5%

Thin Films:	<b>2011</b>	<b>2010</b>
Semiconductor capital equipment market	33.4%	58.7%
Non-semiconductor capital equipment	29.3%	22.3%
Global support	10.0%	15.7%
Total Thin Films	72.7%	96.7%
Renewables	27.3%	3.3%
Total sales	100.0%	100.0%

Overall our sales increased \$68.0 million, or 97.5%, to \$137.7 million for the three months ended March 31, 2011 from \$69.7 million for the three months ended March 31, 2010. The increase in sales reflects a continuation of strong demand in the semiconductor and other thin-film deposition markets in 2011, fueled mainly by a very robust recovery in consumer demand for electronics that began in early 2010. In addition, our revenue in the three months ended March 31, 2010 did not include Renewables revenue from PV Powered, which we acquired on May 3, 2010. Overall demand for our renewable product lines has increased in proportion with an increase in activity in the North American solar market.

**Thin Films**

Results for Thin Films for the three months ended March 31, 2011 are as follows (in thousands):

Sales	<b>2011</b>	<b>2010</b>
	\$ 100,099	\$ 67,423
Operating Income	24,824	

Thin Films sales climbed 48.5% to \$100.1 million, or 72.7% of sales, for the three months ended March 31, 2011 versus \$67.4 million, or 96.7% of sales, in the same period of 2010. This growth reflects continued demand in the semiconductor industry and demonstrates our strength in advanced power solutions for various applications. We also benefitted from another strong quarter in the renewable thin-films market as we continue to leverage our leadership in crystalline silicon processing equipment and strategic customer relationships to address the current growth in the People's Republic of China (the PRC).

In the three months ended March 31, 2011, sales to the semiconductor market rose 12.2% to \$46.0 million, or 33.4% of sales, from \$40.9 million, or 58.7% of sales for the three months ended March 31, 2010. The semiconductor capital equipment market grew throughout 2010 as technology investments at foundries drove a rebuilding of inventory to satisfy the consumer electronics market. In the current quarter, we saw significant growth in the smaller

original equipment manufacturers ( OEMs ) in Korea and Europe driven by capital investment in high-brightness LED and 3D integrated circuits. In the near term we believe that growth in the semiconductor capital equipment industry may pause slightly as OEMs may shift to an inventory consumption mode. As a result, our revenue in this market may be flat to slightly down in the second quarter of 2011 as compared to the first quarter.

Sales in the thin-film non-semiconductor capital equipment markets increased 159.8% to \$40.5 million, or 29.3% of sales, for the three months ended March 31, 2011 compared to \$15.6 million, or 22.3% of sales, for the three months ended March 31, 2010. The markets that comprise the thin-film non-semiconductor capital equipment markets include solar panel, flat panel display, data storage, architectural glass and other industrial thin-film manufacturing equipment markets. Our customers in these markets are predominantly large OEMs.



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The increase in our Thin Films non-semiconductor sales was due to capacity expansion throughout 2010 and into 2011 in the flat panel display and solar panel markets.

Sales to customers in the solar panel market increased to \$20.3 million, or 14.7% of total sales, for the three months ended March 31, 2011 as compared to \$3.8 million, or 5.5% of total sales, for the three months ended March 31, 2010. Our solar panel growth was fueled by the availability of government incentives and grants throughout the world to fund solar array installations in the U.S. and Europe in 2010. The continued availability of, or changes to, these incentives and grants in 2011 could have a significant impact on the performance of our solar panel market in Thin Films. We anticipate that sales in this area will remain relatively constant throughout 2011. In the flat panel display market, we saw a cycle of investing by panel manufacturers in Korea and the PRC in 2010 which is driven by the market adoption of flat panels by PRC consumers, the growth in touch screens for tablet PCs and smart phones and the migration of new technology such as LED backlighting and 3D televisions around the world. During the current quarter, sales in the flat panel display market were lower compared to the fourth quarter of 2010 due to some over capacity and inventory consumption by the large OEMs. We anticipate growth in this market to begin once again in the near term fueled by capacity additions for active matrix organic LED technologies. As a result, sales in this market should increase in the second quarter of 2011 as compared to the first quarter.

Our global support revenue grew 25.5% to \$13.7 million, or 10.0% of total sales, for the three months ended March 31, 2011, compared to \$10.9 million, representing 15.7% of sales, for the three months ended March 31, 2010. The increase in global support sales was due to an increase in factory utilization by our customers throughout 2010, which drove demand for repairs, replacement parts and inventory restocking. The outlook for our service business in 2011 continues to be strong, and we expect it will grow as we expand our product offerings to include maintenance contracts in the growing solar array market.

**Renewables**

Results for our Renewables business segment for the three months ended March 31, 2011 are as follows (in thousands):

	<b>2011</b>	<b>2010</b>
Sales	\$ 37,553	\$ 2,264
Operating Income	2,512	

Renewables sales were \$37.6 million, or 27.3% of sales, for the three months ended March 31, 2011 as compared to \$2.3 million, or 3.3% of sales, in the same period of 2010. This significant year over year growth reflects our acquisition of PV Powered, whose products continue to penetrate the U.S. market for both commercial and residential applications, as well as continued growth of the North American solar market. Sales for the current quarter were down from the fourth quarter of 2010 due to the impact of seasonality and extreme winter weather in many of our core geographic markets. We anticipate a sharp increase in Renewables sales during the second quarter of 2011 as projects delayed due to weather concerns in the first quarter resume again in the second quarter. Our focus on building a leading position in the strategic commercial and utility segments of the inverter market continued this quarter and we generated record bookings in the current quarter.

Our overall backlog increased 49.7% from \$93.1 million at December 31, 2010 to \$139.4 million at March 31, 2011. This increase was primarily driven by the signing of two large multi-megawatt utility projects that are slated for construction throughout 2011.

**GROSS PROFIT**

Our gross profit was \$62.0 million, or 45.1% of sales, for the three months ended March 31, 2011, as compared to \$29.2 million, or 41.9% of sales for the three months ended March 31, 2010. The large year-over-year increase in terms of absolute dollars and percentage of sales was due to an overall boost in production volume throughout 2010, our acquisition of PV Powered and increased leverage of factory overhead, as well as reduced warranty costs resulting from improved quality and lower warranty claims. We expect our gross margin to increase in absolute dollars over the course of 2011; however it may drop as a percentage of sales as our product mix shifts to include a higher percentage of revenue from our Renewables product line, which traditionally has lower gross margins.



**Table of Contents****OPERATING EXPENSES**

The following table summarizes our operating expenses as a percentage of sales for the three months ended March 31, 2011 and 2010 (in thousands):

	<b>2011</b>		<b>2010</b>		<b>Increase/ (Decrease)</b>	<b>Percent Change</b>
Research and development	\$ 15,862	11.5%	\$ 11,142	16.0%	\$ 4,720	42.4%
Selling, general and administrative	20,905	15.2%	12,229	17.5%	8,676	70.9%
Amortization of intangible assets	921	0.7%		0.0%	921	
Total operating expenses	\$ 37,688	27.4%	\$ 23,371	33.5%	\$ 14,317	61.3%

*Research and Development*

The markets we serve constantly present us with opportunities to develop our products for new or emerging applications and require technological changes to achieve higher performance, lower cost and provide other attributes that will advance our customers' products. We believe that continued and timely development of new and differentiated products, as well as enhancements to existing products to support customer requirements, is critical for us to compete in the markets we serve. Accordingly, we devote significant personnel and financial resources to the development of new products and the enhancement of existing products, and we expect these investments to continue. All of our research and development costs for the three months ended March 31, 2011 and 2010 have been expensed as incurred.

Research and development expenses for the three months ended March 31, 2011 were \$15.9 million, or 11.5% of sales, as compared to \$11.1 million, or 16.0% of sales, for the three months ended March 31, 2010.

The increase in research and development expenses of \$4.7 million, or 42.4%, in the three months ended March 31, 2011 as compared to the same period in 2010 was driven primarily by increases in personnel costs, materials and supplies and outside consulting services. We continue to focus on new product development, specifically related to the expansion of our inverter product line globally and, although we have always maintained a very cautious approach to our discretionary spending, we anticipate that research and development expenses will increase in 2011 in terms of absolute dollars but remain within their current range as a percentage of sales.

*Selling, General and Administrative*

Our selling expenses support domestic and international sales and marketing activities that include personnel, trade shows, advertising, third-party sales representative commissions and other selling and marketing activities. Our general and administrative expenses support our worldwide corporate, legal, tax, financial, governance, administrative, information systems and human resource functions in addition to our general management.

Selling, general and administrative (SG&A) expenses for the three months ended March 31, 2011 were \$20.9 million, or 15.2% of sales, as compared to \$12.2 million, or 17.5% of sales, in the three months ended March 31, 2010.

The increase in SG&A expenses of \$8.7 million, or 70.9%, in the three months ended March 31, 2011 as compared to the same period in 2010 was driven primarily by increases in personnel costs and travel to meet the expectations and demands of our global customers. We anticipate that SG&A expenses will continue to increase in 2011 in terms of absolute dollars and will remain within their current range as a percentage of sales.

*Amortization of Intangible Assets*

Amortization of intangibles was \$0.9 million for the three months ended March 31, 2011 (none for the three months ended March 31, 2010). The increase in amortization was the result of amortization of PV Powered intangible assets acquired in May 2010.

*OTHER INCOME, NET*

Other income, net, consists primarily of investment income and foreign currency exchange gains and losses. Other income, net, was \$0.7 million for the three months ended March 31, 2011, as compared to \$0.4 million for the three months ended March 31, 2010. As we do not hedge our currency transactions, we are subject to exchange rate fluctuations.

*PROVISION FOR INCOME TAXES*

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We recorded an income tax provision from continuing operations for the three months ended March 31, 2011 of \$6.3 million, compared to \$1.4 million for the three months ended March 31, 2010, resulting in effective tax rates of 25.0% and 22.0%, respectively. Our effective tax rate may vary from period to period due to changes in the composition of income between U.S. and foreign jurisdictions resulting from our activity. Our effective rate differs from the U.S. federal statutory rate primarily due to the benefit of earnings in foreign jurisdictions which are subject to lower tax rates.

**DISCONTINUED OPERATIONS**

On October 15, 2010, we completed the sale of our gas flow control business, which includes the Aera<sup>®</sup> mass flow control and related product lines to Hitachi Metals, Ltd., for \$43.3 million. Assets and liabilities sold include, without limitation, inventory, real property in Hachioji, Japan, equipment, certain contracts, intellectual property rights related to the gas flow control business and certain warranty liability obligations. The results of continuing operations were reduced by the revenue and costs associated with the gas flow control business and are included in the Results from discontinued operations, net of income taxes, in our Condensed Consolidated Statements of Operations.

**Liquidity and Capital Resources**

Our ability to fund our operations, acquisitions, capital expenditures and product development efforts will depend on our ability to generate cash from operating activities which is subject to future operating performance as well as general economic, financial, competitive, legislative, regulatory and other conditions, some of which may be beyond our control. Our primary sources of liquidity are our available cash and investments and cash generated from current operations.

**CASH FLOWS**

Cash flows during the three months ended March 31, 2011 and 2010 were as follows (in thousands):

	<b>2011</b>	<b>2010</b>
Net cash provided by (used in) operating activities	\$ 2,715	\$ (11,377)
Net cash used in investing activities	(2,390)	(5,195)
Net cash provided by financing activities	1,494	507
Effect of currency translation on cash	(315)	(2,398)
Net change in cash and cash equivalents	1,504	(18,463)
Cash and cash equivalents, beginning of the year	130,914	133,106
Cash and cash equivalents, end of the period	\$ 132,418	\$ 114,643

*Net cash flows provided by operating activities* increased by \$14.1 million to \$2.7 million for the three month period ended March 31, 2011 compared to net cash flows used by operating activities of \$11.4 million for the same period of 2010. This increase was driven by our increase in net income, the collection of accounts receivable on increased sales and offset by the payment of bonuses accrued at December 31, 2010 during the three months ended March 31, 2011.

*Net cash flows used in investing activities* decreased by \$2.8 million to \$2.4 million used in investing activities for the three month period ended March 31, 2011 compared to \$5.2 million used in the same period of 2010.

During the three months ended March 31, 2011, we had net sales of marketable securities totaling \$2.0 million as compared to net purchases of \$4.4 million during the three months ended March 31, 2010.

Capital expenditures increased by \$3.6 million during the three months ended March 31, 2011 to \$4.4 million compared to \$0.8 million during the same period in 2010. We intend to continue to acquire testing equipment to sustain our engineering and new product development efforts as well as capacity expansion for the production of inverters, which will increase as a result of our acquisition of PV Powered.

*Net cash flows provided by financing activities* increased by \$1.0 million to \$1.5 million during the three months ended March 31, 2011 compared to \$0.5 million during the same period in 2010 as a result of the exercise of stock options.

*Effect of currency translation on cash* changed \$2.1 million to negative \$0.3 million for the three month period ended March 31, 2011 compared to negative \$2.4 million for the three months ended March 31, 2010. The functional currencies of our worldwide operations primarily include U.S. dollar ( USD ), Japanese Yen ( JPY ), Chinese Yuan ( CNY ), New Taiwan Dollar ( NTD ), South Korean Won ( KWN ), British Pound ( GBP ) and Euro ( EUR ). Our purchasing and sales activities are primarily denominated in USD, JPY, CNY and EUR. The change in these key currency rates during the three months ended March 31, 2011 and 2010 are as follows:

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<b>From</b>	<b>To</b>	<b>2011</b>	<b>2010</b>
CNY	USD	0.8%	0.0%
EUR	USD	6.3%	(6.4%)
JPY	USD	(1.8%)	(1.1%)
KWN	USD	2.7%	2.3%
NTD	USD	(0.8%)	0.8%
GBP	USD	3.6%	(6.6%)

As of March 31, 2011, we have \$140.0 million in cash, cash equivalents, and marketable securities. We believe that our current cash levels and cash flows from future operations will be adequate to meet anticipated working capital needs, capital expenditures and contractual obligations for the next 12 months.

**Critical Accounting Policies and Estimates**

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires us to make judgments, assumptions and estimates that affect the amounts reported in the Condensed Consolidated Financial Statements and accompanying notes. Note 1 to the Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2010 describes the significant accounting policies and methods used in the preparation of our Condensed Consolidated Financial Statements. Our critical accounting estimates, discussed in the Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2010, include estimates for allowances for doubtful accounts, determining useful lives for depreciation and amortization, the valuation of assets and liabilities acquired in business combinations, assessing the need for impairment charges for identifiable intangible assets and goodwill, establishing warranty reserves, accounting for income taxes, and assessing excess and obsolete inventory. Such accounting policies and estimates require significant judgments and assumptions to be used in the preparation of the Condensed Consolidated Financial Statements and actual results could differ materially from the amounts reported based on variability in factors affecting these estimates.

Our management discusses the development and selection of our critical accounting policies and estimates with the Audit Committee of our Board of Directors at least annually. Our management also internally discusses the adoption of new accounting policies or changes to existing policies at interim dates, as it deems necessary or appropriate.

**ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK****Interest Rate Risk**

Our market risk exposure relates to changes in interest rates in our investment portfolio. We generally place our investments with high-credit quality issuers and, by policy, are averse to principal loss and seek to protect and preserve our invested funds by limiting default risk, market risk and reinvestment risk. As of March 31, 2011, our investments consisted primarily of treasury bills, certificates of deposit, corporate bonds, and agency bonds.

As a measurement of the sensitivity of our portfolio and assuming that our investment portfolio balances were to remain constant, a hypothetical decrease of 100 basis points in interest rates would decrease annual pre-tax earnings by approximately \$0.1 million.

**Foreign Currency Exchange Rate Risk**

We are impacted by changes in foreign currency rates through sales and purchasing transactions when we sell products in currencies different from the currency in which the product and manufacturing costs were incurred. Our purchasing and sales activities are primarily denominated in USD, JPY, CNY and EUR. As these currencies fluctuate against each other, and other currencies, we are exposed to foreign currency exchange rate risk on sales, purchasing transactions and labor.

Our reported results of operations, including the reported value of our assets and liabilities, are also impacted by changes in foreign currency exchange rates. The assets and liabilities of many of our subsidiaries outside the U.S. are translated at period end rates of exchange for each reporting period. Earnings and cash flow statements are translated at weighted-average rates of exchange. Although these translation changes have no immediate cash impact, the translation changes may impact future borrowing capacity, debt covenants and overall value of our net assets.

Currency exchange rates vary daily and often one currency strengthens against the USD while another currency weakens. Because of the complex interrelationship of the worldwide supply chains and distribution channels, it is difficult to quantify the impact of a particular change in exchange rates.



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See the Risk Factors set forth in Part I, Item 1A of our Annual Report on Form 10-K for more information about the market risks to which we are exposed. There have been no material changes in our exposure to market risk from December 31, 2010.

### **ITEM 4. CONTROLS AND PROCEDURES**

#### *Evaluation of Disclosure Controls and Procedures*

We have established disclosure controls and procedures, which are designed to ensure that information required to be disclosed in reports filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized, and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submit under the Act is accumulated and communicated to management, including our Principal Executive Officer (Hans Georg Betz, Chief Executive Officer and President) and Principal Financial Officer (Danny C. Herron, Executive Vice President & Chief Financial Officer), as appropriate, to allow timely decisions regarding required disclosures.

As of the end of the period covered by this report, we conducted an evaluation, with the participation of management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the disclosure controls and procedures pursuant to the Exchange Act Rule 13a-15(b). Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2011. The conclusions of the Chief Executive Officer and Chief Financial Officer from this evaluation were communicated to the Audit Committee. We intend to continue to review and document our disclosure controls and procedures, including our internal controls and procedures for financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business.

#### *Changes in Internal Control over Financial Reporting*

There were no changes in our internal control over financial reporting, except as discussed below, that occurred during the fiscal quarter covered by this Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

As discussed in Note 2, *Acquisition and Disposition*, to our Condensed Consolidated Financial Statements, on May 3, 2010, we acquired PV Powered. We considered the results of our pre-acquisition due diligence activities, the continuation by PV Powered of their established internal control over financial reporting, and our implementation of additional internal control over financial reporting activities related to PV Powered as part of our overall evaluation of disclosure controls and procedures as of March 31, 2011. The objective of PV Powered's established internal control over financial reporting is consistent, in all material respects, with our objectives. However, we believe the design of PV Powered's established internal control over financial reporting is sufficiently different from our overall design and the controls implemented to integrate PV Powered's financial operations into our existing operations constitute a change in internal controls. We are in the process of completing a more complete review of PV Powered's internal control over financial reporting and will be implementing changes to better align its reporting and controls with the rest of Advanced Energy by December 31, 2011.

## **PART II OTHER INFORMATION**

### **ITEM 1. LEGAL PROCEEDINGS**

We are involved in disputes and legal actions from time to time in the ordinary course of our business.

There have been no material developments in legal proceedings in which we are involved during the three months ended March 31, 2011. For a description of previously reported legal proceedings refer to Part I, Item 3, *Legal Proceedings* of our Annual Report on Form 10-K for the year ended December 31, 2010.

### **ITEM 1A. RISK FACTORS**

Item 1A, *Risk Factors*, of our Annual Report on Form 10-K for the year ended December 31, 2010 describes some of the risks and uncertainties associated with our business. The risk factors set forth below update such disclosures. Other factors may also exist that we cannot anticipate or that we currently do not consider to be significant based on information that is currently available. These risks and uncertainties have the potential to materially affect our business, financial condition, results of operations, cash flows and future results. Such risks and uncertainties also may

impact the accuracy of forward-looking statements included in this Form 10-Q and other reports we file with the Securities and Exchange Commission.

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**Natural disasters, health pandemics and other catastrophic events can disrupt our business.**

Catastrophic events in countries in which we do business can prevent or inhibit us or our customers from conducting normal business operations, disrupt our supply chain or information technology systems, and have other adverse effects on us, our customers and our suppliers. The recent earthquake and tsunami that occurred in Japan in March 2011, and the ensuing effects on the Japanese economy and infrastructure, have adversely affected many of our Thin Film customers. Both we and they rely on raw materials and components made in Japan. If we are unable to obtain the requisite raw materials and components in Japan from other sources, our manufacturing processes may be delayed, which would adversely affect our customer relationships and operating results.

**ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS**

None.

**ITEM 3. DEFAULTS UPON SENIOR SECURITIES**

None.

**ITEM 4. REMOVED AND RESERVED**

**ITEM 5. OTHER INFORMATION**

None.

**ITEM 6. EXHIBITS**

- 10.1 Amendment to the Global Supply Agreement, dated as of January 28,2011, by and between Applied Materials, Inc. and Advanced Energy Industries, Inc.+
- 10.2 Amendment to Leadership Corporate Incentive Plan.\*
- 10.3 Executive Change in Control Agreement, dated as of January 1, 2011, by and between Advanced Energy Industries, Inc. and Gregg Patterson.
- 31.1 Certification of the Chief Executive Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 31.2 Certification of the Principal Financial Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32.1 Certification of the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 32.2 Certification of the Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

\* Compensation Plan

+ Confidential treatment has been granted for portions of this agreement.

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**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ADVANCED ENERGY INDUSTRIES,  
INC.

Dated: May 6, 2011

/s/ Danny C. Herron  
Danny C. Herron  
Executive Vice President & Chief Financial  
Officer  
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